Lummi Diet Study 2011

Survey Training and Interviewer Manual

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LUMMI NATURAL RESOURCES DEPARTMENT

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TRAINING OBJECTIVES

By the end of this session, participants will be able to:

1. Describe the purpose and background of the Lummi Diet Study.
2. Describe the roles and responsibilities of project participants.
3. Demonstrate understanding of the interviewing guidelines.
4. Describe how the questionnaire works and the steps needed to complete the survey.
5. Demonstrate the ability to make contact telephone calls and conduct the survey.

ITINERARY/AGENDA

1. Introduction → Review training objectives
2. Purpose and Background of the Lummi Diet Study
3. Administrative Matters

   Break

4. Interviewing Guidelines
5. How the Questionnaire Works

   Lunch

6. Practice Contact Calls and Interviewers

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1. PURPOSE AND BACKGROUND OF THE LUMMI DIET STUDY 2011

A. Study Overview

The Lummi Diet Study will determine the average amount of seafood that is eaten by members of the Lummi Nation. The amount will be expressed in gram/day/kilogram of body weight (g/d/kg).

Fish consumption is one variable used to calculate human health-based water quality criteria that inform federal, state, and tribal Water Quality Standards (WQS), which are adopted under the Clean Water Act. The amount of fish and shellfish (seafood) consumed represents the exposure to toxins and therefore the risk to human health. The water quality standards affect how much of specific toxins can be discharged by cities and industries and are therefore typically controversial. In general, the lower the allowable amount of toxins that can be discharged, the higher the cost to remove the toxins.

The required triennial review of the Lummi WQS in 2011 will provide the opportunity to adopt Lummi-specific data that are protective of the public health of tribal members. The new data will also be used to ensure that the toxic substance criteria of the Washington State WQS protect the health of tribal members.

Until recently, the only seafood consumption rate information available were the values derived from national studies. These studies included the general population and also incorporated non-fish consumers in their calculations. The EPA default value (the EPA approves State and Tribal WQS) was 6.5g/day before 2000 and was adjusted to 17.5 g/day with 142.4 g/day for subsistence communities. Washington State is currently preparing to start the process to adjust their WQS to be more protective of populations that consume more fish than the general United States population. The current Washington State WQS are based on the 6.5g/day default fish consumption rate.

The Lummi people eat considerably more seafood then the average U.S. population. For this reason, the estimates for seafood consumption from national surveys are not applicable to either the Lummi people or to other Indian tribes of the Puget Sound area.

Other surveys of regional tribes and other subpopulations have already been conducted to collect seafood consumption data in Washington and Oregon. The results vary greatly (Table 1) and emphasize the need for Lummi-specific data. Seafood consumption studies conducted in the northwest include:

- A Fish Consumption Survey of the Tulalip and Squaxin Island Tribes of the Puget Sound Region, 1996, Toy (USDA 1990) et al.:
- Asian & Pacific Islander Seafood Consumption Study in King County, WA 1999, published in 2003 in Journal of Exposure Analysis and Environmental Epidemiology
- Fish Consumption Survey of the Suquamish Indian Tribe of the Port Madison Indian Reservation, Puget Sound Region, 2000
- A Fish Consumption Survey of the Umatilla, Nez Perce, Yakama, and Warm Springs Tribes of the Columbia River Basin, Columbia River Inter-tribal Fish Commission (CRITFC), 1994
- Swinomish Fish Consumption Survey, in progress, not published, contact: Jamie Donatuto

Table 1 - Mean, Median, 90th and 99th Percentile of Seafood Consumption for different Puget Sound Populations

	Mean g/day	median g/day	90th %tile g/day	99th %tile g/day	mean g/kg/day	median g/kg/day	90th % g/kg/day	Average Weight kg
Tulalip	72.68	45.13	201.60	-	0.89	0.55	2.47	81.75
Squaxin Is.	72.96	42.91	192.25	-	0.89	0.52	2.35	81.88
A&PI	117.20	89.00	242.00	-	1.89	1.44	3.90	62
Suquamish	213.85	132.09	489.01	-	2.707	1.672	6.19	79
CRITFC	58.7	~30	97.2-130	389	-	-	-	per person

In 2010, Oregon State, after several years of litigation and negotiation, incorporated a 175 g/day consumption value in their updated WQS.

B. Baseline

The baseline for the study is 1985, representing a year of relative seafood abundance as documented in fishery harvest data.

The consumption rates in 1985 are by no means comparable to the heritage rates at treaty times in the 1800s and the rates of the early 1900s, but data about the relative abundance of seafood are documented for 1985 through fish harvest data. A literature review showed that meaningful data can be obtained when asking survey participants to remember their food consumption 20 years in the past.

The assumption of this study is that a 1985 baseline would result in consumption rates and associated toxic substance criteria for the WQS that are protective of the Lummi tribal members if more seafood is available in the future.

C. Selection of Participants

Previous seafood consumption surveys by other tribes indicated males aged 36 to 55 who are boat owners are the highest seafood consumers. Targeting this subpopulation should yield a protective value.

Male tribal members that were in this age group in 1985 are 61 to 80 years old now, which narrows the pool of people to choose from considerably and also brings age-related issues like memory loss into play. There is also no information available about who owned boats at that time. Based on current conditions and practices as well as descriptions of past practices by community members, the study coordinators concluded that it is very likely that male members 20 years of age and older would have been actively fishing and therefore would have had access to fish/shellfish in 1985. For this reason, 150 male tribal members living on the Reservation or Whatcom County 45 years of age and older today were randomly selected to be interviewed.

D. Funding Source

The study is funded primarily by the Agency for Toxic Substances and Disease Registration (ATSDR), a division of the Center for Disease Control (CDC). The grant (No. 1E11TS000111-01) is part of the "Community Health Projects Related to Brownfield/Land Use" project of the ATSDR. Funding for the study is also being provided by the LIBC and EPA. In addition to supporting the development of protective water quality standards, the survey results will also support a reliable risk assessment for Lummi tribal members during the evaluation of cleanup options for contaminated Brownfield/Portfield sites along Bellingham Bay.

E. Database

A database to manage the questionnaire answers was developed in-house by Natural Resource Analyst Craig Dolphin. The answers to the questionnaire recorded by the interviewers will be entered into the database by the study manager. This is one reason why the questionnaire has to be filled out correctly. Only answers in the correct format can be entered in the database and used in the statistical evaluation. Answers that do not conform to the questionnaire have to be discarded and are lost for the study.

F. Further Reading

If you are interested in the how and why the questionnaire was constructed as it is and how the list of fish and shellfish we are using was gathered, here is some further reading.

Literature Review/Reason for Questionnaire Structure:

A literature review identified general issues with long-term recall surveys and with food recall specifically. Generally, it is possible to garner useful data in recall studies with timelines as long as 50 years. In these studies, subjects from former surveys or from life-long cohort studies were re-interviewed, which allowed comparing the data recorded in the past with the present day recall. It was found that recall performance strongly depended on the specific topic. Subjects tend to remember well their body weight in the past with a correlation of 0.95 after ten years and 0.87 after 32 years (Casey, et al. 1991). Smoking habits reach a correlation of 0.84 after 32 years (Krall, Valadian and Gardner 1989); the father's occupation was remembered with 85% accuracy after 50 years, and toilet facilities in post-war Britain with 100% accuracy (Berney and Blane 1997). Food recall fared less well with correlations as low as 0.3 (Dwyer, et al. 1989). While the perception of past consumption is influenced by current habits, it was also shown that recalled intake more accurately predicts past consumption than current intake (Dwyer and Coleman 1997). A study with Seventh-Day Adventists in California found that recall over 20 years was modest, but with exceptions: foods that had special meaning in the culture were recalled with up to 88% accuracy (Fraser, et al. 1998). Seafood plays a defining role in Lummi culture and should therefore fall in the same category. In addition, recall is more accurate for food that is eaten often and/or in a pattern, and for food that is eaten rarely but is unusual or eaten at unique or ceremonial events (Krall, Dwyer and Coleman 1988). As seafood is consumed regularly among Lummi tribal members and also served at ceremonial events, these criteria are fulfilled too. The reported

frequency of consumption was judged to also be usefully accurate in the review of other studies (Wirfaelt 1998).

Several studies explored possibilities to improve food questionnaires to aid recall and to improve the general interview efficiency. Several approaches listed in these studies were applied to the Lummi Diet Study:

- A list of food items supports recall as opposed to free-reporting where the subject has to provide all eaten food items from memory (Krall, Dwyer and Coleman 1988).
- Food models significantly help remembering portion sizes (Krall, Dwyer and Coleman 1988, Wirfaelt 1998).
- Categories of grouped food items have to be meaningful to the subjects. For instance, grouping foods by nutrient value is less helpful than grouping them by meals ('breakfast', 'lunch', etc.) Pairing certain items that are usually eaten together help cue recall (Krall, Dwyer and Coleman 1988, Krall and Dwyer 1987, Subar, et al. 1995).
- Avoid contracting several foods into one question (e.g. asking about oranges, apples, etc. is better than asking about fruit). This can lead to misunderstandings, forgotten items, and it also requires computation by the subjects. It was found to be more successful to use 'embedded' questions about certain items, where the subject was asked subsequently more details about one item. This, again, avoided computation by the subjects (Subar, et al. 1995, Krall and Dwyer 1987).
- It is difficult for most people to compute seasonal intake over one year. Questions that ask for the amount and frequency only throughout one season are easier and more accurate to answer (Subar, et al. 1995).
- Longer questions and more instruction combined with simple wording, following 'autobiographical' memory and interviewer-administered questionnaires showed survey improvements (Friedenreich 1994, Wirfaelt 1998). A longer questionnaire can actually lead to shorter interview times because of better comprehension of the questions, easier retrieval clues, and less need for computation (Subar, et al. 1995).
- It is important to pay attention to adequate units. Some food items are not commonly thought about in weight or volume measures but in counts (e.g., eggs) (Subar, et al. 1995). For the Lummi study that would pertain for instance to clams. Other items that are eaten commonly but not in a regular pattern are easier to remember in form of weekly or monthly purchases instead of single portions (Krall, Dwyer and Coleman 1988).
- Studies inquiring into events in the past, as well as studies with shorter timelines, have profited from adding biographical context to the interviews. Interviewers might provide a historical timeline of notable events for a time, which then was used to construct a personal timeline with events in the life of the subject ("lifegrid"). Other approaches include recalling the time of day an event took place or conversations around an event (Berney and Blane 1997, Wirfaelt 1998, Friedenreich 1994, Krall, Dwyer and Coleman 1988).
- Pre-testing the questionnaire in lab- and field-tests was recommended. Pre-tests allow correcting questions for comprehension and reliability (Friedenreich 1994, Subar, et al. 1995).

Seafood Species List:

In order to determine a list of finfish and shellfish that includes all the seafood consumed by Lummi tribal members, a list of seafood species culled from the previously mentioned surveys was circulated among tribal members of the Lummi Natural Resources Department, the Lummi Fisheries Commission, and the Lummi Cultural Resources Protection Commission. This review process also allowed for alternative names or more commonly used names for individual species to be determined (e.g., Sea Urchins = Sqwi'tsi, Coho Salmon = Silvers). Subsequently, four native members of the LNR staff and the Cultural Resource Department were interviewed to learn more about the fish species most commonly consumed, and about common preparation methods and situations where seafood is consumed. This aided in grouping the fish and shellfish species into meaningful categories, and determining which "embedded" follow-up questions would allow capturing the complete consumption pattern (see *Literature Review* above).

The initial test interviews revealed that individual fish and shellfish species are usually prepared with fairly specific methods, and that different parts of the fish or shellfish are consumed for different species. Member of the Lummi Nation generally smoke and can large amounts of fish, which is prepared for consumption differently and in different contexts than the fresh fish. Additionally, significant amounts of seafood are consumed at the frequent gatherings for funerals, namings, and other ceremonial events. Personal experience shows that consumption patterns at gatherings are very different from everyday meals. The above detailed literature review suggested that embedding questions about preparation methods and body parts for each species would make it easier and faster to answer the questions. Condensing questions into bigger categories in order to shorten the questionnaire does not aid memory.

The Tribal Advisory Committee, consisting of Lummi tribal members of the Natural Resources Department, the Natural Resources Commission, and the Cultural Resources Protection Commission, then reviewed the draft questionnaire to check the assumptions of the investigators.

2. ADMINISTRATIVE MATTERS

A. Materials needed for the survey

Each interviewer will be issued a filing box with the following contents:

- 50 Questionnaires
- A list of participants to contact and interview
- Log forms for each participant, checks, and a receipt book
- A booklet with photographs of the fish/shellfish in the questionnaire (Seafood ID)
- A binder with scaled photographs of the portion models
- A plate and a bowl used for the portion model photographs to have a three dimensional comparison
- Envelopes for the Informed Consent Forms
- Pens

The interviewers will need a telephone to contact participants and to set up appointments and transportation to travel to the interviews.

B. Job of the Interviewer

The job of the interviewer is to:

- Contact each person on the assigned list of participants and convince them to participate in the survey.
- Maintain a separate Interview Log for each participant.
- Make an appointment with the participant.
- Read the Informed Consent Form to participant and obtain their signature prior to starting the interview.
- Conduct the interview and fill out the questionnaire in the correct and readable form.
- Obtain a signature form the participant on the Informed Consent Form after completing the interview.
- Provide the participant with the honorarium check upon completion of the interview.
- Deliver the completed questionnaire to the study manager (Monika Lange).

C. Where to direct Questions/Complaints by the Participant

For questions by the participant that the interviewer cannot answer or for complaints about the study direct the participants to the telephone numbers, email addresses, and names listed in the consent form. Do not give out other names, email addresses or telephone numbers.

Merle Jefferson, Sr.
Executive Director
Leroy Deardorff
Environmental Director
Jeremy Freimund, P.H.
Water Resources Manager
Lummi Natural Resources Department
2616 Kwina Road
Bellingham, WA 98226
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David Oreiro
Chair
Institutional Review Board
Northwest Indian College
2522 Kwina Road
Bellingham, WA 98226
(360) 392-4249
doreiro@nwic.edu

D. Contacting Participants

The interviewer will contact each person on the provided list. Please work from the top down, not randomly. If the provided telephone number is obsolete, research the correct telephone number. Allow up to eight tries for each participant. Log the contact attempts on the provided form (Interview Log).

If an appointment gets canceled or rescheduled, follow up on appointment changes. Allow up to three appointment times (two times rescheduling) for each participant. Log the appointments on the provided form. Use a separate Interview Log for each participant.

E. Location of Interviews

The interviews are to take place at a time and place that is convenient to the participant. The options are the home of the participant, the Sam Cagey Room at the Lummi Natural Resources Department (during office hours), or another reasonable location in the vicinity of the Reservation.

F. Safety

Do not enter into a situation that feels unsafe. Several of the participants will already be familiar to you. If you make an appointment with an unknown person, use preferably a public venue and let somebody else know where you are going. Let the study manager know if you have concerns. Your safety is more important than the interview.

G. Confidentiality

You are bound by strict ethical procedures which prevent you from ever revealing what any participant has said. While the respondents will be answering many questions about their private lives, they will confide in you because the study promises strict confidentiality – this means the luxury of being totally open and honest without fear of being censured and quoted personally (e.g., about their weight, their eating habits, or where seafood was obtained from).

This is very important if respondents have questions about confidentiality. Explain to them that their names will never be connected with what they tell you.

H. Check-in

Check in with the study manager weekly and as needed to report progress and problems and to deliver completed questionnaires. Always feel free to contact Monika or Jeremy with questions.

I. Timecards

A separate timecard needs to be completed during each pay period that you work on the survey. The timecard needs to be labeled “R2” and signed by Jeremy. The timecard will have the specified charge code in it.

3. INTERVIEWING GUIDELINES

A. Goal of the Interview

The goal of the interview is to record complete and honest answers to all questions in the questionnaire in order to obtain a complete picture of the seafood consumption of the respondent in 1985.

The answers should not be biased (see next section) and the questionnaire has to be filled out so that it is readable and correct in order to be able to be entered into the database. A questionnaire that is not filled out correctly or completely has to be discarded!

B. Bias and Neutrality

An interviewer can introduce bias to an interview by influencing the answers of the participant. This happens mostly unconsciously. Both you and the participant, for instance, might feel that it is better to report higher amounts of seafood eaten and you might react to the higher amounts more encouragingly and friendly than to lower amounts. Or a participant might feel embarrassed about the high amounts of food he is eating if you appear judgmental (joke or facial expressions) and might underreport. This would be bias and is not the right way to approach the interviews.

The interviewer has to stay neutral and non-judgmental at all times.

C. Introduction and Rapport

An introductory letter about the study was already sent to the randomly selected participants.

Some general rules for introducing yourself (this applies both to the telephone contact and the actual interview):

- Know roughly what you will say before the interview. Try not to sound anxious or hesitant when you talk to the respondent. Know in advance what you want to say, but don't use a "canned" speech that will sound phony or like a telemarketer.
- Do not say more than necessary. Your introduction should be done in the shortest way possible. You should not spend much time giving explanations that the respondent did not ask for because this may cause the respondent to not want to be interviewed.
- Be business-like, yet friendly.

The word "rapport" refers to the positive relationship that develops between two people in a social or professional situation that allows good communication between them. Rapport helps to make the respondent feel comfortable, listen attentively, and give full and forthright answers. Interviewers should be keenly aware of the need to develop rapport with the respondent during the first few minutes of communication. To establish good rapport, the interviewer should give the respondent the impression that the person with whom they are speaking is:

- Professional,
- Sincere,
- Interested
- Understanding, and
- Courteous.

Do not be overly jokey or chummy during the interview. It actually distracts people from responding clearly. Studies have shown that interviewers that are business-like achieve better interviews than interviewers that are overly friendly during the interview .

Appearing professional requires that the Interviewer be confident about the purpose of the study and that he/she is NEUTRAL with respect to the subject matter. Making a professional impression depends on several things. First, the Interviewer will seem more professional if he/she conveys to the respondent that s/he is part of an important effort. A professional impression also depends on the way the interviewer looks and the interviewer's voice. The interviewer should try to listen to her/his own voice when speaking to the respondent. Many people change their voice unintentionally when they are nervous. Some individual's voices get higher when nervous; others begin to speed up their speech without realizing it. The interviewer can practice by doing practice interviews.

D. How to ask questions

Questions should always be read exactly as written. Every respondent should hear the same questions, read in exactly the same way. Even small changes to a question, magnified by the large number of respondents, could affect the final results. Questions are ordered in a certain way to obtain information in the easiest, most systematic way possible. They should always be asked in the way they are ordered in the questionnaire. If the interviewer explains that he/she is working with a standardized questionnaire, most respondents will understand and not be annoyed by some repetition.

The interviewer should read the questions in a natural conversational tone and follow the punctuation in the question. When answer categories are to be read, the interviewer should put a brief pause between the options so the respondent knows what the choices are. The way questions are read should reflect the interviewer's overall neutrality about the subject matter and encourage the respondent to talk freely about the issue. In this way, the interviewer does not unconsciously transmit his/her attitude about a question by the way the questionnaire is read. The interviewer should read the questions at a slow even pace. If the pace is not even, the message the interviewer gives to the respondent is that the questions that are read faster are less important. A slow even pace, however, should not lapse into a monotonous lifeless reading of the question.

There are some situations in the questionnaire where you do not have a script, for instance, for the food models. We will go over in the test interviews how you explain these to the respondents.

Read only those questions in the questionnaire book that are on the white background. Do not read the instructions (circle one, skip to next fish, etc.) to the participant.

E. Probing

In most interviews, you will have to ask additional questions in order to clarify the respondent's response. This is called probing. There are several issues to keep in mind when probing for clarification:

Use neutral probes that do not suggest answers. Probes are needed to get more complete and detailed answers. Probes cannot be "leading" - that is, your probe cannot suggest any particular answer to the respondent. Probes should be used whenever the respondent is hesitant to answer a question; when he seems to have trouble expressing himself; whenever there is any reason for the interviewer to think that the respondent has not given a complete report.

Many interviewers forget to use two of the most effective neutral probes: (1) silence and (2) repeating the original question. The interviewer who can wait patiently and quietly will soon find that 15 seconds of silence is more than most respondents can take, and the respondent will often expand or clarify a previously inadequate answer if you simply wait. And repeating the question is another neutral way of probing. Be sure to repeat only the question as it is written in the questionnaire.

One way to help with obtaining numbers and amounts – the majority of this questionnaire – is to ask: "Did you eat this more than 5 (10, 20) times? Did you eat it less than 30 (10, 50) times?" It is easier to compare to a concrete number than plucking it out of thin air. Use this only if the respondent has trouble to come up with a number!

F. Clarifications

There may be times when the respondents will ask the interviewer to clarify a question or a term used in a question. This is a situation in which the possibility for influencing the respondent's answer is great. In order to understand the data we collect, we need to know that every respondent heard the same question. The Interviewer should repeat the question as written, emphasizing the parts of the questions where the respondent had difficulty understanding. If the interviewer interprets the question for one respondent, he/she may change the meaning of that question so that the respondent is no longer answering the same question that other respondents are answering.

G. "Don't know" Answers

With some exceptions, responses such as "Don't know" and "Prefer not to say" are legitimate responses. However, respondents may use the "Don't know" response when avoiding a question or to fill in a silence, as well as when they really do not know the answer. It is always preferable that a respondent gives a well-founded estimate rather than merely saying "Don't know." Don't accept a "don't know" without probing at least once starting with an expectant silence.

H. Inconsistencies

The Interviewer must be alert for inconsistencies. If the respondent's answer indicates that he has forgotten or overlooked a fact that was given previously, it is important that the Interviewer does not make the respondent feel defensive. Instead, the interviewer reminds him by saying: "I want to make sure that I've recorded everything correctly. Earlier I recorded that." If the respondent wishes to change one of the responses, the interviewer can go back and enter the corrected response.

I. Explanatory Comments and Positive Reinforcement

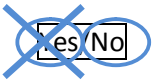
There are a number of situations in which an interviewer may find that he or she can keep better rapport with the respondent and keep the interview flowing more smoothly if the interviewer makes explanatory comments about the task he or she is performing. This may be done when there is a silence or break in the flow of the interview. ("I have to write this down and then we will move to the next section." "The next section is about shellfish." etc.)

4. HOW THE QUESTIONNAIRE WORKS

A. Filling out the Questionnaire and Corrections

Please fill out the questionnaire in a readable and clear manner!

Most of the questionnaire asks for numbers or for choices to be circled. If you make a mistake or the respondent changes his mind, “delete” the wrong answer with a cross (x) and write the correct answer next to it or circle the right answer respectively. If you need to “delete” a box that you have crossed off, make one additional horizontal stroke through the box and mark the right box.



Times per	Week	Month	Year
3	☒	☒	☐

If there is the potential for confusion, please add a note for clarification (“this is the right box” with an arrow, for example).

B. Honorarium

The participants will receive a $25 honorarium after they have completed the interview. This means they have to sign the consent form and allow you to ask all questions in the questionnaire and make an honest effort to answer the questions.

The questionnaire asks about 54 different fish and shellfish and obviously not everybody eats all of that, but the participant needs to give you the opportunity to ask about each species.

C. Introduction

The questionnaire gives you a “script” for the introduction and further explanations. Follow the text verbatim. We will have the chance to change the text after the training if the test interviews show that the text is unclear or hard to read.

D. Informed Consent Form

In the introduction you are instructed to ask the participant to sign the informed consent form. Take out the form and let the participant read the form and answer questions if necessary. If necessary, you can read the form to the participant. If he agrees to the interview, ask him to sign the form. You can only conduct the interview if the form is signed. Sign your name next to the signature of the participant (the line says “witness signature”).

E. General Data

Read the last part of the introduction and ask the questions under Descriptive Data. Circle the appropriate choices (male, female, yes, no, etc.) or record the appropriate numbers (age etc.).

The only open-ended question in the questionnaire is on page 3: "What are the reasons that you ate more or less seafood in 1985?" Record here the answer as verbatim as possible.

F. Timeline

The timeline is an exercise that will help the participant to step back in time and remember the events and daily habits in 1985. The literature review conducted for this study indicates that the timeline excercise will make it easier for the participant to remember what he ate.

Read the introduction and then take out the pre-printed timeline and read it with the participant. The timeline lists national events and events taken from the *Squol Quol* that took place in 1985. Several suggested questions are supposed to help the participant remember. You do not have to record the answers. The timeline can stay with the participant.

Keep the timeline exercise to under 10 minutes.

G. Community Gatherings

The next part of the "script" explains the process of answering the questions that follow. Only read the text on the white background to the participant. The text below that is shaded grey is only meant as a reminder to you.

The first questions concern community gatherings. With community gatherings we mean events like namings, weddings, powwows, funerals, smokehouse ceremonies, other potlucks, or the Stommish festival.

Circle the appropriate choice for the yes and no questions. If the answer is no, it looks like this: Yes/(No)

For Question S2 ("In 1985, how often did you go to community gatherings?"), enter a number in the space for "Times per" and mark the appropriate box (week, month, year).

For instance, if the participant answers " I went to 3 gatherings per month", enter 3 in the "times per" space and cross the "month" box.

Times per	Week	Month	Year
3	☐	☒	☐

For Question S5 ("If so, how much more or less did you eat at a gathering?") you can enter ¼, ½, 3 if the participant says they ate a quarter more, or only half as much, or three times as much. You can also enter it in percent, if that is the way the participant answers. (If it is meant to be more or less is clear from Question S4.)

H. Fish and Shellfish Questions

The fish and shellfish questions are the main part of the questionnaire. You need the portion model binder and the seafood ID booklet for this part.

First Page

The first species is Chinook salmon. Look at the booklet with the participant (Chinook is the first picture, they are numbered the same as in the questionnaire) to make sure that you are talking about the same fish. There will probably be no question about common fish like Chinook or Chums, but do it anyway to follow the protocol. The pictures will be useful for the less common fish and shellfish and where several different names exist for the same species.

Ask the first question: "Did you eat Chinook in 1985?", and circle the appropriate answer. If the respondent answers "no", you can skip to the next fish species.

If the respondent answers "yes", ask the next question ("How much Chinook did you normally eat in one meal at home?") and read all the options before the respondent answers. The options are different common ways to eat the fish (meals). Next to the meals are numbers that correspond to the portion model numbers in the binder. If the respondent says that he ate fish hash, for instance, show him the portion model 08. Ask him if he usually ate as much fish hash as shown on the picture in one sitting, or twice as much, or half as much, etc.

Below is an example for an respondent that said he ate twice the amount of fillet without skin as in the portion model, half the amount of eggs in the portion model, and three sandwiches:

	Food Model #	Amount (1/2, 1,2)
Meat/Fillet with skin	01	
Meat/Fillet without skin	01	2
Head	05	
Eggs	06	1/2
Fish Hash	08	
Sandwich	09	3
Soup/Broth/Chowder	10	
Other:		
Other:		
Other:		

If the respondent ate the fish in a different way, use the food model that comes the closest and write the number of the model in the Food Model # column and the amount in the amount column. Give a brief description in the provided box.

For some species (some clams, smelt, etc.), the pictures show a plate with several fish/clams and the respondent has the choice to say "I ate three plates of that" or "I usually ate 10 of these fish/clams". In the amount column, it says "count" if this is an option. Write "count" or a "C" in front of the number if the respondent answers with how many fish/clams he ate.

In the example, a participant ate 5 whole fish:

	Food Model #	Amount (1/2, 1, 2, etc.) **or** **Count of Fish for Whole Fish**
Whole Fish	13	Count: 5
Eggs	07	
Other:		
Other:		
Other:		

Second Page

The next pages ask how often the respondent ate a fish/shellfish species. The questionnaire asks separately about fresh, frozen, smoked, and canned fish/shellfish. People usually eat fresh, frozen, smoked, or canned seafood at different times of the year – the freshly caught fish in season, the preserved food later. By asking separately, the respondent does not have to do the math and add it all up – this makes it easier and faster to answer even though there are more questions.

The first question on the page is "Did you eat freshly caught Chinook (fish that was not stored frozen for a longer time, or smoked, or canned)?" (The part in the parentheses is a clarification that you do not have to repeat every time, only for the first few fish.) If the respondent answers "no" to the question, you can go to the next part (frozen Chinook). If the respondent answers "yes", ask the respondent when he ate this. If he ate it only in certain months, circle those months, otherwise circle ALL.

Example: "I ate fresh Chinook in May, June, and July"

The next question asks how often the respondent ate the fresh (frozen, smoked, canned) fish/shellfish during the months they told you above. In the table, the same meals show up again that you asked the respondent about on the first page. If the respondent told you that he ate meat/fillet without skin, eggs, and sandwiches before, ask him now how many.

Make sure that the answers on page one and the following pages match. If the respondent told you on page one that he ate this much fillet and fish hash, than you need times per day, week, month, or year in the following pages for that and the other way round.

For some species, the questionnaire only asks about fresh and frozen, or fresh and smoked because that is the most common form of eating it. If the participant says he also ate it differently, go the very end of the shellfish sheets and fill out one of the blank "other" sheets.

Fill out the questions for all species in the questionnaire and take care that you don't skip any pages. At the end of the questionnaire, there are some "Extra Sheets" in case somebody ate a fish/shellfish species that is not listed in the questionnaire.

I. Finish

Read the finish text to the respondent and ask him to confirm that the interview was finished by signing the Informed Consent Form a second time. Place the form in an envelope and seal it. Hand the participant the honorarium check and have him sign the receipt book. Finish the appointment in a friendly and courteous manner.

Turn in the questionnaire and the sealed envelope to the study manager so that the data can be entered into the data base.

THANK YOU!

5. TEST INTERVIEWS AND TELEPHONE CALLS

We will practice the interviews in the training session.